SILPAK RU-350

Rapid Curing Urethane Castable Rubber

RU-350 is a two-component, fast-setting polyurethane rubber that cures at room temperature (RTV) and has a 1 to 1 mix ratio. It has a hardness of Shore A50. RU-350 Urethane Rubber is a low viscosity system which cures to provide an elastomer with high strength properties. This product is excellent for prototyping and model making applications and for the casting of production parts, props, tools, and more.

Features

- Easy 1A:1B Mix Formulation
- Low Shrinkage on Cure
- Rapid Demold Time
- Reproduces Fine Detail
- Low Viscosity
- Room Temperature Curing (RTV)

Applications

Any application where a flexible rubber part is required:

- Prototype and Model Making
- Props
- Tools
- Production Parts

Physical and Handling Properties

Property	Typical Value
Cured Color	Amber
Mix Ratio, by weight	1A:1B
Initial Mixed Viscosity, at 77°F, cP	600
Hardness, Shore A	50
Pour time, 1-lb mix	4 min.
Demold Time at 73°	2 hours
Demold Time at 158°	30 mins.
Specific Gravity	1.03
Specific Volume (in^3/lb)	26.9
Shrinkage Upon Cure (in/in)	0.0020*
Tensile Strength, psi	280
Elongation, %	240
Tear Strength (pli)	57

**Shrinkage is primarily caused by gelling while hot then cooling.*
Parts that cure with minimal temperature rise exhibit minimal strength.
To obtain physical properties reported above, cure schedule is 16 hours at 140°F (60°C).
Values listed above are typical and not intended for use in specifications.

Proper Use and Safety

Read all instructions and safety data sheets prior to use. Consult safety data sheets for all recommended safety precautions.

Preparation of Mold

Use a Silicone RTV Mold—***Tin or Platinum RTV***—works best with these systems since no mold release is needed when casting into Silicone RTV. If using Latex, Urethane RTV rubber or any other type of mold, a proper mold release must be used—MR150 or ER-2300 is recommended. Ensure that all surfaces are dry and free from moisture prior to casting to prevent material contamination.

Mixing

Before mixing, ensure that material and molds are at proper working temperature—above 65F. These systems are fast curing and should be processed quickly. Before adding A to B, part B should be stirred or shaken thoroughly to ensure that any separated material is remixed. Select a clean, dry plastic container for mixing. Avoid using wood or paper products, which could cause cure problems. Weigh out the proper ratio of A to B and mix well, scraping sides and bottom of mixing container to ensure a thorough mix. After mixing—usually within 45-60 seconds—immediately pour into mold.

Curing

Do not disturb the mold until part is ready to be de-molded. Prematurely demolding parts may cause deformation, especially in thin areas. Preheating molds—100F—will expedite cure, while low temperatures will slow curing time and extend the demold time. Full Cure within 3Days @ 77˚F. To expedite a full cure, post cure parts at 150F for 12-16 hours. **Note:** Pressure casting—applying positive pressure 40-60 psi—will improve clarity and rubber performance.

Thickening for Brush-On

Add **PE Min Fibers** or **Fumed Silica** to mixed Parts A and B to thicken the liquid mix to a gel for application by brush or trowel.

Storage & Shelf Life

For best results, store products in unopened containers at room temperature (60-90°F/15-32°C). Use products within six months from date of shipment. Part B darkens with age, but product performance is not affected.

Accessories

Colorants

All pigments should be added to the "B" side only at 1-2%. Castable urethanes are affected by direct and indirect sunshine and will discolor over time.

- CU Pigment: *Red, Yellow, White, Blue, Black, Brown, Fleshtone*
- Bright Shade Powder: *Green, Orange, Red, Yellow, Pink.* Dry powdered pigments requiring thorough premixing.
- UD Dye: *Red, Yellow, Black, Blue*. Transparent coloring used in Clear and Transparent Urethane & Epoxy